

# Safety in the Science Classroom and Laboratory

## Chemical Management:

*In North Carolina, it is the responsibility of the Superintendent of a school system to appoint a qualified chemical hygiene officer to direct the development of and compliance with the chemical hygiene plan for the school system. This plan must include protocols and processes for chemical management for science laboratories and preparation rooms, as well as, professional development for science teachers and administrators. Because laws, codes and standards change, the plan must be reviewed and updated annually or more often as necessary.*

## Instruction, Supervision, and Maintenance of a Safe Learning Environment:

In North Carolina, it is the teacher's responsibility to address safety in planning instructional activities, laboratory investigations, and to supervise students so that all activities and investigations are carried out in a safe manner. The teacher is responsible for adhering to professional standards, NC laws and codes when assessing the learning environment. Ongoing professional development is an essential part of ensuring laboratory safety.

It is the principal's responsibility to provide personal protective equipment and resources to ensure science teachers can teach the North Carolina's science curriculum safely. All *North Carolina Standard Course of Study* Science classes are designed to be laboratory courses and must include a laboratory component.

The suggestions and resources for science safety and resources included here are in no way comprehensive but may serve as a quick reference for a few common safety issues.

### 1) Chemicals:

- a. Order only the amounts you will use for one year. Do as much microchemistry as possible to minimize hazards
- b. Be sure you have an appropriate storage system for chemicals.
- c. You must have the MSDS available for all chemicals in your classroom/prep room (including kitchen/grocery store chemicals). You should go over the MSDS information with students each time they will be using a chemical. Document this in your lesson plan book.
- d. Use the smallest amounts and weakest/most dilute concentrations of chemicals that you can and still have a viable investigation/demonstration.
- e. Be sure you have appropriate disposal arranged before using a chemical.
- f. Avoid the use of toxic chemicals.
- g. Sulfur is a common allergen. Reactions that use or produce sulfur compounds should be performed under a working hood.